



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,210	02/06/2006	Jonathan Mark Hardy	056258-5106	2342
9629 7590 06/13/2007 MORGAN LEWIS & BOCKIUS LLP 1111 PENNSYLVANIA AVENUE NW WASHINGTON, DC 20004			EXAMINER COPPINS, JANET L	
			ART UNIT 1626	PAPER NUMBER
			MAIL DATE 06/13/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/539,210	Applicant(s) HARDY ET AL.	
	Examiner Janet L. Coppins	Art Unit 1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,7-11 and 13 is/are rejected.
- 7) ☒ Claim(s) 4-6 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1 and 4-14 are now pending in the instant application.

Response to Amendment

2. The Examiner acknowledges receipt of Applicants' Amendment and Response of March 27, 2007. Applicants have cancelled claims 2, 3 and 15 and have amended claims 1, 4, 5 and 14.

Claim Rejections - 35 USC § 102

3. (a) Claims 1-8, 10, 11, 13, and 14 previously rejected under 35 U.S.C. 102(b) as being anticipated by Hamamoto et al, Chemistry Letters, 1986.
(b) Claims 1, 2, 7, 8, 10, 11, and 13 previously rejected under 35 U.S.C. 102(b) as being anticipated by JP 62-212395.
(c) Claim 14 previously rejected under 35 U.S.C. 102(b) as being anticipated by Wilk et al, Tetrahedron Letters, 2001.
4. In view of Applicants' amendatory changes to the claims, the Examiner withdraws the anticipation rejections of the aforementioned claims.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

Art Unit: 1626

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
8. Claims 1, 2, 7, 8, 10, 11, and 13 rejected under 35 U.S.C. 103(a) as being unpatentable over JP62-212395.

Applicants are claiming the following compounds:

Applicants are claiming a method for the preparation of phosphitylation agents $R^1-Y^1-P(NR^2R^3)_2$, according to the process of claim 1, comprising:

- a) reacting a compound of formula PX_3 with a compound of formula HNR^2R^3 to form a compound $X-P(NR^2R^3)_2$
- b) reacting $X-P(NR^2R^3)_2$

Determining the scope and content of the prior art

The JP document teaches the preparation of a phosphorous amide compound, $R^3-O-P(NR^2N^3)_2$, which is the same as the instantly claimed process of preparation of instant claim 1. The JP document teaches the reaction of a trihalophosphine (the same as Applicants' " PX_3 ")

Art Unit: 1626

with a di-isopropylamine (the same as Applicants' "HN-R²R³") to form a bisaminomonohalogenphosphine (the same as Applicants' "X-P(NR²R³)₂") which is then reacted with an alcohol, R₃-OH (same as Applicants' "R¹-Y¹-H") in bases such as Et₃N, under anhydrous conditions.

Ascertaining the difference between the prior art and the claims

The difference between the prior art and the claims is that Aristoff does not teach a single disclosed compound or species that anticipates the instant claims.

Resolving the level of ordinary skill in the pertinent art

However, minus a showing of unobvious results, it would have been obvious to one of skill in the art to prepare the prostacyclin analogs as instantly claimed in claim 1 since the prior art reference discloses a similar genus of prostacyclin analogs with the same activity of inhibiting platelet aggregation. Aristoff teaches a larger genus of compounds that completely encompass the smaller genus that is instantly claimed as structure I in claim 1. One would be motivated to prepare the instantly claimed invention since Aristoff has enabled and taught the broad scope of compounds in the many examples and formulae disclosed in the '075 patent, for example in columns 31-7. Therefore, one skilled in the art would know to pick and choose from the various substituents disclosed and the same core prostacyclin analog structure, as guided by Aristoff in formula XI, particularly when they possess the same activity and share the same utility of treating ischaemic disorders. Therefore, absent a showing of unobvious and superior properties, the instant claimed genus of prostacyclin analogs would have been suggested to one skilled in the art.

Claim Objections

9. Claims 9, 12, and 15 are objected to as being dependent on rejected base claims.

Conclusion

10. In conclusion, claims 1 and 4-14 are pending, claims 1-8, 10, 11, 13, and 14 are rejected, and claims 9, 12, and 15 are objected to.

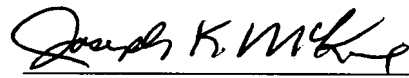
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janet L. Coppins whose telephone number is 571.272.0680. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph K. McKane can be reached on 571.272.0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1626

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Janet L. Coppins
January 8, 2007



Joseph K. McKane
SPE, Art Unit 1626